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Investigation of a nickel coating deposition processes from solid nickel electrolyte

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Abstract

© Published under licence by IOP Publishing Ltd. Nickel is the basis of most of the heat-resistant materials used in the aerospace industry for power plant parts. Recently, the method of electrolytic coating with nickel is used to create protective coatings on aluminum, magnesium, zinc and cast irons. It is known to use the method of nickel plating of aluminum and magnesium alloys, in particular to protect the duralumin blades of screw aircraft. The lifetime of nickel-plated cast-iron drums for drying in paper production is significantly higher than in conventional cast iron, and paper quality is also improving. The aim of the work is to influence the concentration of hypophosphite on the kinetics of the cathode process and on the properties of the resulting nickel coating.

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